

# **Agreement of Parents & Teachers on Ratings of Attention, Social Problems, and Mental Health in Youth with ADHD Compared to Youth with Dyslexia**

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## **Research Mentor and other collaborators:**

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## **Objective:**

Researchers evaluated the relationship between parent and teacher reports on level of internalizing and externalizing concerns (i.e., Child Behavior Checklist [CBCL] and Teacher Report Form [TRF]) for children with Attention-deficit/hyperactivity disorder (ADHD) vs. Dyslexia. Results will be used to inform clinicians who assess children and adolescents for ADHD and Dyslexia.

## **Background:**

Assessments of problem behaviors via screening questionnaires provide needed data for diagnosing children and adolescents with ADHD and Dyslexia (Tripp, et al., 2006). The Child Behavior Checklist (CBCL) is a standardized form that assesses parent reported problem behaviors in youth aged 4-18 years (Achenbach & Rescorla, 2001). The Teacher Report Form (TRF) is nearly identical to the CBCL but is completed by teachers (Achenbach & Rescorla, 2001). Previous studies have established the validity and reliability of the CBCL and TRF (Salbach-Andrae, et al., 2008) and these instruments are effective in terms of cost, time, and administration.

## **Hypotheses:**

We have several hypotheses:

1. There will be a positive correlation between parent and teacher reports on level of internalizing and externalizing concerns.
2. Parents and teachers will endorse symptoms in the At-Risk or Clinical range on the Attention scale, Social Problems scale, and the Anxiety/Depression scale for children who receive a diagnosis of ADHD but not Dyslexia.
3. The most significant scale will be the attention scale (externalizing) on the CBCL and TRF.
4. There will be high agreement between parents and teachers for attention, social problems, and anxiety/depression in patients with ADHD (since attention problems are probably also present at home/visible to parents).
5. There will be less agreement between parents and teachers for attention, social problems, and anxiety/depression rating in patients with Dyslexia, as parents may not notice reading/learning concerns as easily as teachers (e.g., parents may perceive difficulties as inattention, while teachers may recognize learning difficulties).

## **Method:**

Researchers used de-identified data from the UIHC's Department of Pediatrics' Learning & Attention Disorders clinic data repository to investigate similarities and differences in parent

and teacher reports of youth behaviors. Randomized research identifiers were used along with year of visit; data were stored on password protected computers with password protected files.

The final sample included 139 participants. Pearson correlations were conducted between parent and teacher reports on each subscale within three identified diagnostic groups: ADHD Primary diagnosis, Dyslexia Primary diagnosis, and combined ADHD and Dyslexia diagnoses. Z-score comparisons were then used to compare r values across the correlations between groups.

### **Results:**

The final sample included 139 participants (Ages 6-17, average age = 10.30; 55% male, 87% Caucasian, 95% Non-Hispanic). Pearson correlations were calculated to determine the relationship between parent and teacher subscale reports for three groups: ADHD Primary (n=31), Dyslexia Primary (n=33), and ADHD & Dyslexia Co-Occurring (n=75).

Within the ADHD Primary group there were statistically significant positive correlations between parents and teachers on ratings of Attention Problems ( $r = .377$ ,  $n = 31$ ,  $p = .037$ ), Withdrawal/Depression ( $r = .385$ ,  $n = 31$ ,  $p = .032$ ), and Total Externalizing Behaviors ( $r = .632$ ,  $n = 31$ ,  $p < .001$ ). Within the Dyslexia Primary group, there were statistically significant positive correlations between parents and teachers only on ratings of Attention Problems ( $r = .596$ ,  $n = 33$ ,  $p < .001$ ). Within the Combined ADHD & Dyslexia Co-Occurring Group, there were statistically significant positive correlations between parents and teachers on ratings of Attention Problems ( $r = .328$ ,  $n = 75$ ,  $p = .004$ ), Social Problems ( $r = .227$ ,  $n = 75$ ,  $p = .050$ ), Anxiety/Depression ( $r = .378$ ,  $n = 75$ ,  $p < .001$ ), Withdrawal/Depression ( $r = .295$ ,  $n = 75$ ,  $p = .010$ ), Total Internalizing Behaviors ( $r = .391$ ,  $n = 75$ ,  $p < .001$ ), and Total Externalizing Behaviors ( $r = .490$ ,  $n = 75$ ,  $p < .001$ ).

Z scores were calculated to compare correlations across the three groups. There was significantly more agreement on Attention Problem for patients with Dyslexia than those with both ADHD and Dyslexia ( $z = -4.77$ ,  $p < .001$ ). No other Z score comparisons were significantly different.

### **Conclusion:**

Parents and teachers of patients with only ADHD showed high agreement on the Attention Problems, Withdrawn/Depression, Rule Breaking, Aggressive Behaviors, and Total Externalizing Behaviors. This indicates that for patients with only ADHD, there is high agreement between parents and teachers of externalizing concerns associated with the diagnosis. ADHD appears to be well-identified by both parents and teachers among this sample. Consequently, the data supports our first hypothesis. For parents and teachers of patients with only Dyslexia, significant agreement was limited to the Attention Problems scale. One possible explanation for this is that parents and teachers mislabeled Dyslexia as an attention problem. This finding challenged our second hypothesis. Parents and teachers of patients with both ADHD and Dyslexia diagnoses showed high agreement on nearly all the CBCL and TRF scales (i.e., Internalizing, Externalizing, Anxious/Depressed, Withdrawn/Depressed, Social Problems, Thought Problems, Attention Problems, Rule Breaking, and Aggressive Behavior). One potential

explanation for this is that patients with multiple diagnoses might exhibit more severe or obvious behaviors, which could lead to better ratings and more agreement between parents and teachers.

**Limitations:**

Limitations for this project include small group sizes, low racial diversity, no information on socioeconomic status, and uneven comparison group sizes.

**Citations:**

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